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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

BUTLER, M

ART UNIT PAPER NUMBER

9

3206

DATE MAILED:

09/23/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 4/25/96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 1-23 are pending in the application.

Of the above, claims 22-23 are withdrawn from consideration.

2. ☐ Claims have been cancelled.

3. ☐ Claims are allowed.

4. ☒ Claims 1-21 are rejected.

5. ☐ Claims are objected to.

6. ☐ Claims are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on                     . Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on                     , has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed                     , has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no.                     ; filed on                     .

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

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### Part III DETAILED ACTION

#### Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Thomasson (FR, 980 957).

3. Claim 1 rejected under 35 U.S.C. § 102(b) as being anticipated by Takamura et al.

Takamura et al teach a billet equivalent to applicants "assembly" - including a metallic tubular sheath - equivalent to applicants "metal tube blank"-- and a metallic certain core -- equivalent to applicants' "metal core. The billet is mechanically worked as claimed by applicant into "a tube of desired diversions" upon which the center core is removed

#### Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 1-18 and 20-21 are rejected under 35 U.S.C. § 103 as being unpatentable over Thomasson in view of Furukawa Electric Co. Ltd.. Thomasson teaches the method essentially as claimed but lacks a teaching of applicant's specific metal compositions. However, Furukawa Electric Co. Ltd. teach forming a shape memory alloy pipe including a Ni-Ti alloy. Thomasson teaches a core surrounded by a tube blank in which the assembly is elongated as claimed. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Thomasson's metal alloy characteristics with Furukawa Electric

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Co. Ltd.'s metal alloy specifics since Furukawa Electric Co. Ltd. teach an old and well known metal composition for facilitating and more acyl forming an alloy pipe.

6. Claims 1-6 and 11-23 are rejected under 35 U.S.C. § 103 as being unpatentable over Takamura et al in view of Therwarudchelvan.

In a case where Takamura et al's plastic Information of a metallic center core would fail to coincide applicant's "stretched core", Takamura et al teach the method essentially as claimed but lacking a specific teaching of a "stretched condition", specific sample lengths, stretching forces, inner diameter, martinsite temperatures, specific alloys and art "discrete lengthens" as claimed. However, Thiruvarudchelvan teaches forming elongated articles wherein material is placed within a die cavity and is further placed under tension or compression as the material moves through the cavity while it is also simultaneous by retained. Since thiruvarudchelvan's tension condition explicitly pressures the stretching of an article it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the metallic center core, as taught in Takamura et. al. under tension and/or rotation as taught by Thiruvarudchelvan, because doing so would render as improved method to facilitate a reduction in circular cross section (and here shearing stresses) for the removal of one article

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within another article. In addition, the of orinentioned is also capable of achieving a continuous or stepped tapered assembly. With regards to applicant's specific sample lengths, stretching forces, "inner diameter", martensite temperatures and specific alloys, all are regarded within the art as obvious matters of design choice lacking a showing of criticality, as claimed, and absent any new or unobvious results since they solve no stated problems. With regards to applicants specific a second pipe arranged concentrically with each other, heating the billet, and applying hot extrusion to the billet while maintaining the heating temperatures. While a hot extrusion step is used to increase bondry strength, Ohashi et al teach that heating is used to consolidate layers which in turn would originally reduce surface stresses (Cnfr. col 2, 50-59) It would have been the method of heating the billet assembly previous to subsequent work, as taught by Ohashi et al, with the billet cut lengths, the previous would also have been obvious to a person of ordinary skill in the art since objects cut to specific lengths would be more manageable for handling. The specific measure merits of lengths are also deemed obvious matters of design choice lacking any showing of articuli ad absent any new or unobvious results.

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Claims 7-10 rejected under 35 U.S.C. § 103 as being unpatentable over Takamura et al in view of Thiruvarduchelvan as applied to claims 1-6 above, and further in view of Ohashi et al.

Ohashi et al teach preparing a billet comprising a first pipe and assembly as taught in the above combination, since to do so would provide an expedient process for removing a separate inner core of an assembly.

Response to Amendment

5. Applicant's arguments with respect to claims 1-21 have been considered but are deemed to be moot in view of the new grounds of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc W. Butler whose telephone number is (703) 308-1787.

Butler/msm

August 9, 1996

  
IRENE CUDÁ  
PRIMARY EXAMINER  
GROUP 3200